



# Biodiversity in Hawaii

Spring 2023

## Description:

The Hawaiian archipelago has been shaped over millennia by the action of waves, volcanoes, and the living organisms that landed upon it. Today, the activities of humans on the islands, as well as humans thousands of miles away, are leaving their mark on this remote ecosystem. While the isolation of the Hawaiian islands provides a unique opportunity to study adaptive radiation and endemism, today it is an exemplary place to study invasive species and extinction. Students will depart for a nine-day field course with Ecology Project International to learn firsthand about the interrelationship between traditional Hawaiian culture and the natural environment. For a contemporary view on human impacts, students will engage in hands-on research collecting and interpreting scientific information that will inform ecological conservation and restoration strategies. During their stay on the island of Maui, students will be camping with limited access to showers.

## Essential Questions:

- How do human activities impact the unique ecology of a tropical island?



# Corral Bluffs & 1st-Grade Buddies

By Sophia B. '26  
March 1, 2023

Yesterday we took a hike to Corral Bluffs where our guides took us through time and taught us about how species grew and evolved over time after the meteor that hit the earth and killed most of life. We learned that the first plants to occur were ferns. Palms, nuts, and legumes came after that. I found it really fascinating that the meteor was about the size of Denver, and it took out life across the whole planet. Within a few days, the blazing heat reached the whole world.

Today, we got to share with 1st graders what we're going to be doing in Hawaii and some of the animals that we might see. It was a lot of fun sharing with younger students what we will be doing and listening to what they had to say. The first graders were all so curious and asked lots of questions. They gave us questions that we will find an answer to in Hawaii. When we come back we will share our experiences with our buddies and answer their questions.





# Bear Creek Nature Center

By Dominique B. '26  
March 2, 2023



Today we took a trip to the Bear Creek Nature Center and looked at the native environments. My favorite habitat was the riparian. At the stream, we did some water testing and found the PH levels as well as the phosphate levels. We also found some very interesting insects in the stream. The insects in that stream can be classified into three groups of sensitivity. We found many insects and looked at them through microscopes. I really enjoyed walking through the trails and finding the tracks of different species. We found traces of deer eating shrubs and pocket gophers that live underground. I learned about the huge biodiversity in a small ecosystem.





# First Adventure in Hawaii

By Sarah H. '26  
March 5, 2023

Yesterday was pretty interesting: a 1.5-hour van ride, a 2-hour flight, no layover, a 6-hour flight, a 30-minute taxi ride, and finally a 30-second walk to our tents. We were lulled to sleep by the soothing waves, which seemed to surround us, and before we knew it, we were awoken to the sound of birds all around us, happily chirping to announce the morning. Unfortunately, the happy chirps were loud and continuous, so we had no choice but to answer the wake-up call. After some introductions and a quick breakfast, we walked down to the ocean and did some snorkel tests. My favorite part was after I finished by test. I got to sit in the water with some friends and let the waves move me back and forth. It was very peaceful. After that, we drove up to Haleakalā, listen to birds, and watch a beautiful sunset in the freezing cold. My favorite part of the day, however, was the van ride home. It was an hour and a half of 11 children belting songs at the top of their lungs. I'm already having such a good time and I can't wait to snorkel all day tomorrow.





# Rainy Day

By Brent M. '26  
March 6, 2023

After waking up to the sound of wild chickens, we went snorkeling. At the first spot, conditions were not great so we went somewhere else. There were many different creatures such as urchins, fish, and even a turtle. We had our lunch on the beach. We decided to leave due to the rain and made a stop to watch whales. We left there because of rain too. When we got back to camp, there were puddles under the tents. One broke, leading two people to relocate. Tents were moved and we learned Hawaiian in the van. We ate at a restaurant that night due to the campsite flooding. Despite the minor disaster, it was a good day.





# The Chillest Days of Them All

By Lahee Y. '25  
March 7, 2023

We started the day with a light sprinkle and some breakfast. It was probably the best night of sleep I've had so far. There was a nice light rain on the tents while I was sleeping. The sound of the rain on the tents on top of the sound of the waves crashing into the shore was really nice. After breakfast, we had a debrief of the day and went to go meet Ekalu to talk about water and coral and also saw how they are affected by humans. After that, we had an eco lesson about coral. My favorite part of the day was the free time we had to run around Lahaina. It was really nice! Everyone went on a shopping spree and got a bunch of things. I got a ton for my family and also treated myself to a pineapple smoothie. It was really good, but it really messed up my mouth and my stomach. I hung out with Sophia, Dominique, Micah and Daniel. Once we got back, we talked a little about our end-of-course project and then got ready for dinner. We had spaghetti, which was better than I expected. I had a lot of fun watching Sophia and Daniel's team cook. We played a little frisbee after with almost everyone on the beach for a bit and then ended our day with a schedule debrief and talked about if we reached our goals. I went to my tent, got ready for bed, closed my eyes and fell asleep to the sound of rain on my tent and waves lapping over the shore.



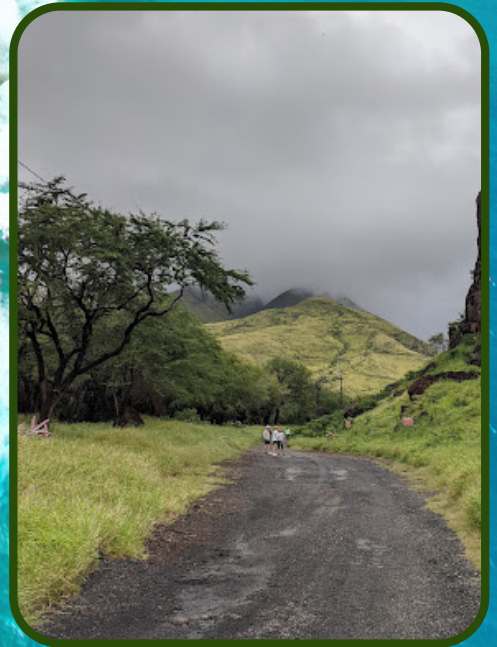


# Weeds & Lime Trees

By Micah R. '24  
March 8, 2023

Today we went to clear weeds from lime trees. On the way, we stopped and looked at a whole bunch of petroglyphs that were scratched at a rock face. These were created by people many years ago our guide, Eklou, had the group do a Hawaiian chant before entering the area in order to pay respect to the people who built it and the native people who were buried on top of it. We finished up our adventure by 12:00. We then have lunch and went to a farmer's market. Everyone had fun buying fruits, smoothies, and candy. Afterward, my group made dinner, and I had a lot of fun making curry.

I did many new things throughout the day. For example, I had never made curry. I had never seen a noni plant or seen an in-person hula performance. To end the day, we all stated whether or not we completed our goals and we also gave every student a shout-out. The familiar sound of the game "Splurt" served as a closer to a day filled with activity.





# Invasive Trees

By Wyatt N. '26  
March 9, 2023

Thursday was a very tough and rewarding day. We started the day off at 6 a.m. instead of the usual 7, which was a shake-up to a lot of people. We then had a 45-minute van ride to an office because we filled out an outdated form. Afterward, we cleaned off our boots of parasites and seeds from Colorado. When we were done we finished our drive to pick and saw invasive pine trees. Then we went on a hike for a little more than 3 hours and told some riddles before we went home for dinner.





# Waihe'e Coastal Dunes & Wetlands Refuge

By Meia Aime '26  
March 10, 2023

March 10th, 2023

Most days begin at 7am with breakfast and opening the day. That involves going over what I was going to do throughout the day and making goals to complete. At around 8:10am, we left camp to go to Waihe'e Refuge. The drive was around 45 minutes. When we arrived, we immediately noticed the large waves on the ocean, the lush green grass and trees (which was basically everywhere) and the many peacocks that inhabited that area. We walked a little ways to a small clearing where we met our guides in the Refuge. We also did a prayer of thanks and permission as well as a protocol where we went down a line and introduced ourselves to our Refuge guides. After that it was a 13 minute hike to where we would begin our work pulling and uprooting invasive Guinea grass. When we approached our first bunch of the grass, we realized that this was going to be a long day. We worked

from 10am to 12pm, perhaps pulling around 60 or so bunches of the invasive grass. At 12, we stopped for a lunch break until around 12:45 and 1. After that it was back to work from 1-3. A big observation I made while pulling invasive grass was that there were probably more than 8 species of spiders under each bunch of grass.

We actually ended up only working one more hour after lunch. We then got to learn about the importance of taro in Hawaiian culture as well as ask one of the guides in the Refuge about the religion in Hawaii and the different Gods. Mythology as well.

At around 3pm, we voyaged over to a beach in Waihe'e Refuge where we walked around the shore collecting microplastics and plastics for 15 minutes. After we had gathered

two to three jars and a large black garbage bag's worth of plastic, we sat down at a picnic table and went over biomagnification and bioaccumulation of the microplastics and plastics. The talk lasted around half an hour. A few minutes later and we were on our way to dinner.

The dinner was pizza from Costco, which sounds greasy, but was a treat for us. This lasted until about 4:40, after which, we headed back to camp. When we arrived at camp, at around 6:50, we resumed work on our posters until no later than 8:30. Subsequently, we would close the day and head to bed.

— Aloha! — Ah — Aloha!





# Hui Hou, Hawaii

By Tristan K. '26  
March 11, 2023



Grains of sand slipped through my fingers as I watched the red streaks of the early morning sky shoot across the sky. Softly, the waves crashed as the roosters crowed and the birds sang. From this beautiful beach, I could see many islands, including Haleakala. It seemed like only yesterday that I watched the sunset on its peak. But, that's when I realized something. Every morning, I had come to the beach for 15 to 30 minutes to just sit and see everything in peace. No activities to do, nothing to worry about; just peace. I always like to play some soft songs in my head as I sit. And I realized that I keep coming back to one line in a song, "Help me make the most of freedom and the pleasure, nothing ever lasts forever. Everybody wants to rule the world." The song is Tears for Fears, Everybody Wants to Rule the World. The four deep words that hit me are, "Nothing ever lasts forever," because it's so true.



My experience on this archipelago of pleasure has been amazing. But, today was my last full day on Maui. Had I done enough? Was I ready to return to the cruel, real world that we live in? Twenty years from now, when I think back on this, had I made a mistake going? Leaving? These questions race through my mind like a rapid questionnaire. But, there is only one question I would have to answer and that is, "was I satisfied?" Simply, yes I



was. I think I actually felt inner peace as a matter of fact. While the water runs over my sandy toes and cars are now heard driving along the lush hills of the West Maui Mountains, the beautiful red color of the clouds go away, signifying that I have finally entered morning. After coming to Maui with my family a couple of years ago, I never thought I'd be back in the beating sun again.

Thanks to CSS's ECS program I obtained that experience once more. Yes, the sun was much worse, the rain was an obstacle, and the roosters and chickens ... well, they're just annoying. But, after all of that, one thing remains. The beauty of it, whether it be driving up the gold mountain, Haleakala, or exploring corals in the ocean. The final part of my reflection is about the experience. Let me explain it to you like riding a horse. On

the first day, I approached the horse and attempted to get onto its saddle. But, I was given rain and chickens for the next couple of days. After more negative effects from this horse, I finally harnessed it and hopped on. Like other new experiences, you have to learn all the steps of it. And as I play more music in my mind, I realize that my time had run out but that I would never forget what I did.

After my morning routine, we headed to a beach to snorkel. It was very deep and thanks to the soft crackling encasing my ears I knew the vivid coral was alive. When I free-dived down, I could hear the magnificent whale song. As we headed back to the shore, we saw a large turtle pass us by. Once we got on the sand, some of us took off our gear and jumped back into the water to get hit by large waves. Then one of our guides gave us a whale lesson. After that, we left the beach, got some shaved ice, and headed back to camp. We presented our environment problem projects and prepared pesto pasta. Then, it changed to quinoa. Then, we stopped cooking. Then, we filled out our Mauka to Makai reflection. After that, we finally cooked and had a nice campfire as we all hung out with friends. The sparks strewn about into the open night as I took a deep breath in. I wish I could stay here forever, but life must go on. And, I'll have to realize that although it seems it will never end, nothing ever lasts forever. A hui hou (until we meet again), Hawaii.

